COPY OF PAPERS ORIGINALLY FILED

gp 2123

PTO/SB/21 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application No.	09/148,392
Filing Date	September 4, 1998
First Named Inventor	Franklin M. Baez
Group Art Unit	2123
Examiner Name	W. Thomson
Attorney Docket Number	42390P5512

RECEIVED
FEB 2 2 2002
Technology Center 2100

Total Number of Pages in This Submission: 24

ENCLOSURES *(check all that apply)*

- [X] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment / Response
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s)
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [X] Other Enclosure(s) *(please identify below):*

1. Request for Withdrawal of Abandonment,
2. Copy of postcard, Amendment and Response to Office Action mailed

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Thinh V. Nguyen, Reg. No. 42,034 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	January 29, 2002

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail with sufficient postage in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on:

January 29, 2002

Typed or printed name	**Barbara Hayashi**		
Signature		Date	**January 29, 2002**

PTO/SB/17 (11-01)
Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT ($)

Complete if Known	
Application Number	09/148,392
Filing Date	September 4, 1998
First Named Inventor	Franklin M. Baez
Examiner Name	W. Thomson
Group/Art Unit	2123
Attorney Docket No.	42390P5512

METHOD OF PAYMENT (check one)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None
☐ Deposit Account

Deposit Account Number: 02-2666

Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

The Commissioner is authorized to: *(check all that apply)*

☐ Charge fee(s) indicated below ☒ Credit any overpayments
☐ Charge any additional fee(s) during the pendency of the application
☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	740	201	370	Utility filing fee	
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

		Extra Claims		Fee from below	Fee Paid
Total Claims	28	** −	=	X	=
Independent Claims	4	−	=	X	=
Multiple Dependent					=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple Dependent claim, if not paid
109	84	209	42	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)

***or number previously paid, if greater, For Reissues, see below*

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for *ex parte* reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Prosessing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($)

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Thinh V. Nguyen	Registration No. (Attorney/Agent)	42,034	Telephone	(714) 557-3800
Signature				Date	01/29/02

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2039.

Our Docket No.: 042390.P5512

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Franklin M. Baez

Application No.: 09/148,392

Filed: September 4, 1998

For: DESIGN OPTIMIZATION OF CIRCUITS BY SELECTING DESIGN POINTS ON PARAMETER FUNCTIONS TO IMPROVE OPTIMIZING PARAMETERS OF CIRCUITS WITHIN DESIGN CONSTRAINTS

Examiner: William D. Thomson

Art Group: 2123

REQUEST FOR WITHDRAWAL OF ABANDONMENT

Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

In response to the Notice of Abandonment mailed January 14, 2002, Applicant respectfully requests the abandonment be withdrawn for the following reasons:

1. Applicant filed a response to the Office Action dated April 24, 2001, on October 24, 2001, with a three-month extension.
2. The Examiner telephoned the Applicant on November 6, 2001 to advise that he was going to issue a Notice of Abandonment. The Applicant advised the Examiner at that time that a response was filed on October 24, 2001 with a three-month extension. The Examiner replied that he would call the Applicant and request a faxed copy of the response if he did not receive it soon.

Applicant hereby encloses copies of the following:

1. A copy of the Amendment and Response to the Office Action showing a Certificate of Mailing executed on October 24, 2001; and

2. A copy of the postcard confirming the Patent and Trademark Office's receipt of the Amendment and Response to the Office Action.

Please proceed with further examination of this application on the basis of the attached copy of the papers originally filed.

Acknowledgement of the active status of this application is respectfully requested.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Dated: January 29, 2002

THINH V. NGUYEN
Reg. No. 42,034

12400 Wilshire Boulevard, Seventh Floor
Los Angeles, California 90025
(714) 557-3800

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: January 29, 2002.

Barbara Hayashi

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN
LOS ANGELES

Application No.: 09/148,392 Filing Date: 09/04/98 BSTZ Docket #: 42390P5512 Atty/Sec: TVN/bh

Date Mailed: 10/24/2001 Docket Due Date(s): 10/24/2001 Client: Intel Corporation

Title Design Optimization of Circuits by Selecting Design Points on Parameter Functions to Improve Optimizing Parameters of Circuits Within Design Constraints

Inventor(s) Baez

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

- ☒ Amendment: (13 pgs)
- ☐ Appeal Brief & two copies (__ pgs)
- ☐ Application. (_ pages w/ cover & abstract)
- ☐ Assignment & Cover Sheet (__ pgs)
- ☒ Certificate of Mailing
- ☐ Continued Prosecution Application (CPA)
- ☐ Declaration & POA (__ pgs)
- ☐ Drawings: __ sheets, __ figures
- ☐ Express Mail No: __
- ☒ Extension of Time: three (3) months
- ☒ Fee Transmittal (original & copy)
- ☐ Other

- ☐ Information Disclosure Statement & PTO/SB/08 (__ pgs)
- ☐ Issue Fee Transmittal (original & copy)
- ☐ Notice of Appeal
- ☐ Petition for: __.
- ☐ Request for Continued Examination (RCE)
- ☐ Reply Brief (__ pgs)
- ☐ Request and Certification Under 35 U.S.C. 122(b)(2)(B)(i)
- ☐ Request to Rescind Previous Nonpublication Request
- ☐ Response to Notice of Missing Parts & Formalities Letter
- ☐ Terminal Disclaimer
- ☐ Transmittal of Formal Drawings
- ☒ Transmittal Letter
- ☒ Check No. 12626 in the Amount of $1,022.00
- ☐ Check No. in the Amount of

CM

STATUS DB-LA

PTO/SB/21 (12/97)
Approved for use through 9/30/2000. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	17

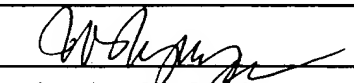
Application No.	09/148,392
Filing Date	September 4, 1998
First Named Inventor	Franklin M. Baez
Group Art Unit	2123
Examiner Name	W. Thomson
Attorney Docket Number	42390P5512

ENCLOSURES ***(check all that apply)***

- [X] Fee Transmittal Form
  - [ ] Fee Attached
- [X] Amendment / Response
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [X] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition Routing Slip (PTO/SB/69) and Accompanying Petition
- [ ] To Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Small Entity Statement
- [ ] Request for Refund
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Additional Enclosure(s) *(please identify below):*

Remarks

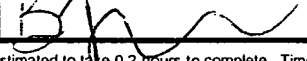
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Thinh V. Nguyen, Reg. No. 42,034 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	October 24, 2001

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail with sufficient postage in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on:

October 24, 2001

Typed or printed name	**Barbara Hayashi**		
Signature		Date	**October 24, 2001**

PTO/SB/17 (10-01)
Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 2000

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT	($)	1,022.00

Complete if Known	
Application Number	09/148,392
Filing Date	September 4, 1998
First Named Inventor	Franklin M. Baez
Examiner Name	W. Thomson
Group/Art Unit	2123
Attorney Docket No.	42390P5512

METHOD OF PAYMENT (check one)

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number: 02-2666

Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

☒ Charge Any Additional Fee(s) Required Under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

☐ Applicant claims small entity status. See 37 CFR 1.27.

2. ☒ **Payment Enclosed:**

☒ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	740	201	370	Utility filing fee	
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

			Extra Claims		Fee from below		
Total Claims	28	- 27** =	1	X	18.00	=	$18.00
Independent Claims	4	- 3** =	1	X	84.00	=	$84.00
Multiple Dependent						=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple Dependent claim, if not paid
109	84	209	42	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 102.00

**or number previously paid, if greater, For Reissues, see below

FEE CALCULATION (continued)

3. ADDITIONAL FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for *ex parte* reexamination	
112	920*	112	920*	*Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	*Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	920.00
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) _____

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 920.00

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Thinh V. Nguyen	Registration No. (Attorney/Agent)	42,034	Telephone	(714) 557-3800
Signature				Date	10/24/01

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2039.

PTO/SB/17 (10-01)
Approved for use through 10/31/2002. OMB 0651-0032
U S Patent and Trademark Office. U S DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2000

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT	($)	1,022.00

Complete if Known	
Application Number	09/148,392 -
Filing Date	September 4, 1998
First Named Inventor	Franklin M. Baez
Examiner Name	W. Thomson
Group/Art Unit	2123
Attorney Docket No.	42390P5512

METHOD OF PAYMENT (check one)

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number: 02-2666

Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

☒ Charge Any Additional Fee(s) Required Under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

☐ Applicant claims small entity status. See 37 CFR 1.27.

2. ☒ **Payment Enclosed:**

☒ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	740	201	370	Utility filing fee	
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

			Extra Claims		Fee from below		
Total Claims	28	- 27** =	1	X	18.00	=	$18.00
Independent Claims	4	- 3** =	1	X	84.00	=	$84.00
Multiple Dependent						=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple Dependent claim, if not paid
109	84	209	42	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 102.00

**or number previously paid, if greater, For Reissues, see below

FEE CALCULATION (continued)

3. ADDITIONAL FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for *ex parte* reexamination	
112	920*	112	920*	*Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	*Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	920.00
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) _____

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 920.00

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Thinh V. Nguyen	Registration No. (Attorney/Agent)	42,034	Telephone	(714) 557-3800
Signature				Date	10/24/01

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2039.

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Docket No.: 42390P5512

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

FRANKLIN M. BAEZ

Application No.: 09/148,392

Filed: September 4, 1998

For: **Design Optimization of Circuits by Selecting Design Points on Parameter Functions to Improve Optimizing Parameters of Circuits Within Design Constraints**

Art Group: 2123

Examiner: W. Thomson

PETITION FOR EXTENSION OF TIME PURSUANT TO 37 C.F.R. § 1.136(a)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with 37 C.F. R. § 1.136(a), Applicant for the above-identified application respectfully Petitions the Commissioner for a three (3) months month extension of time, extending the period for response to October 24, 2001, from the Office Action dated April 24, 2001. The petition filing fee of 920 and the Response to Office Action are attached.

If it should be determined that a longer extension of time is required to prevent this application from being abandoned, please charge any additional fees to Deposit Account No. 02-2666. A copy of the Fee Transmittal is enclosed for deposit account charging purposes.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: October 24, 2001

Thinh V. Nguyen, Reg. No. 42,034

12400 Wilshire Blvd., 7th Floor
Los Angeles, California 90025
Telephone: (714) 557-3800

I hereby certify that this correspondence is being deposited with t United States Postal Service as First Class mail with sufficient postage in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: October 24, 2001.

Barbara Hayashi *10-24-01*

Barbara Hayashi *Date*

Copy #11

Docket No.: 042390.P5512

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Franklin M. Baez

Application No.: 09/148,392

Filed: September 4, 1998

For: DESIGN OPTIMIZATION OF CIRCUITS BY SELECTING DESIGN POINTS ON PARAMETER FUNCTIONS TO IMPROVE OPTIMIZING PARAMETERS OF CIRCUITS WITHIN DESIGN CONSTRAINTS (Amended)

Examiner: William Thomas

Art Group: 2123

AMENDMENT AND RESPONSE TO THE OFFICE ACTION

BOX NON-FEE AMENDMENT
Assistant Commissioner for Patents
Washington, DC 20231-9998

Sir:

In response to the outstanding Office Action, mailed April 24, 2001, please amend the above-identified Application as follows:

IN THE TITLE

Please delete the Title of the Application and insert the following in lieu thereof:

--DESIGN OPTIMIZATION OF CIRCUITS BY SELECTING DESIGN POINTS ON PARAMETER FUNCTIONS TO IMPROVE OPTIMIZING PARAMETERS OF CIRCUITS WITHIN DESIGN CONSTRAINTS--.

IN THE ABSTRACT

Please delete the Abstract and insert the following in lieu thereof:

--One embodiment of the present invention is a method and machine readable medium for determining optimal values of design parameters of a subsystem to meet design constraints. The subsystem includes a number of circuits. A parameter function is created for the corresponding circuits. The parameter function represents a relationship among design parameters of the subsystem. The design parameters include constraint and optimizing sets. Initial design points for the parameter functions having a first sum of the constraint sets and a second sum of the optimizing sets are selected to such that the first sum satisfies the design constraints. New design points for the parameter functions are selected such that the second sum is improved while the first sum is within the design constraints.--

IN THE CLAIMS

Following is a complete set of claims as amended with this response, which includes new claims 28 and 29, and amendments to claims 1, 3, 11, 13, 22, and 24.

CLEAN CLAIMS

1. (THREE TIMES AMENDED) A method comprising:

(a) creating parameter functions for a plurality of circuits in a subsystem, the subsystem having design constraints, each one of the parameter functions corresponding to each one of the circuits, the parameter functions representing a relationship among [the] design parameters of the subsystem, the design parameters including constraint and optimizing sets;

(b) selecting initial design points on the parameter functions having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and

(c) selecting new design points on the parameter functions such that the second sum is improved within the design constraints.

2. The method of claim 1 wherein the creating the parameter functions comprises:

(a1) configuring each circuit of the plurality of circuits; and

(a2) generating values of design parameters for each circuit according to the configured circuit, the values providing the parameter functions.

3. (AMENDED) The method of claim 2 wherein the constraint set includes constraint parameters having values selectable to meet the design constraints and the optimizing set includes optimizing parameters having values to be optimized.

4. (AMENDED) The method of claim 3 wherein selecting the new design points comprises:

(c1) selecting values of the constraint parameters to meet the design constraints;

(c2) determining values of the optimizing parameters corresponding to the selected values of the constraint parameters based on the parameter functions; and

(c3) iterating c(1) and (c2) until values of the optimizing parameters are within a predetermined optimal range.

5. The method of claim 3 wherein the constraint parameters include a delay parameter and the optimizing parameters include a power parameter.

6. The method of claim 5 wherein the design constraints include a delay constraint.

7. The method of claim 6 wherein (a1) comprises:

sizing components in each circuit.

8. The method of claim 6 wherein (a1) comprises:

selecting a design technology for each circuit, the design technology being one of static and dynamic technologies.

9. The method of claim 7 wherein (a2) comprises:

(a21) generating a circuit netlist representing the configured circuit;

(a22) generating a timing file based on the circuit netlist using a circuit critical path;

(a23) determining power of the configured circuit based on the circuit netlist;

(a24) calculating timing values by using a timing simulator; and

(a25) calculating power values by using a power estimator.

10. The method of claim 9 wherein [optimizing] selecting the new design points comprises:

(c1) selecting values of the delay parameter within the delay constraint;

(c2) determining values of the power parameter corresponding to the selected values of the delay parameter based on the parameter function; and

(c3) iterating (c1) and (c2) until values of the power parameter are within a predetermined optimal range.

11. (TWICE AMENDED) A machine readable medium having embodied thereon a computer program for processing by a machine, the computer program comprising:

(a) a first code segment to create parameter functions for a plurality of circuits in a subsystem, the subsystem having design constraints, each one of the parameter functions corresponding to each one of the circuits, the parameter functions representing a relationship among design parameters of the subsystem, the design parameters including constraint and optimizing sets;

(b) a second code segment to select initial design points on the parameter functions having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and

(c) a third code segment to select new design points on the parameter functions such that the second sum is improved within the design constraints.

12. (AMENDED) The machine readable medium of claim 11 wherein the first code segment comprises:

(a1) a code segment to configure each circuit of the plurality of circuits; and

(a2) a code segment to generate values of design parameters for each circuit according to the configured circuit, the values providing the parameter functions.

13. (AMENDED) The machine readable medium of claim 12 wherein the constraint set includes constraint parameters having values selectable to meet the design constraints and the optimizing set includes optimizing parameters having values to be optimized.

14. (AMENDED) The machine readable medium of claim 13 wherein the third code segment comprises:

(c1) a code segment to select values of the constraint parameters to meet the design constraints;

(c2) a code segment to determine values of the optimizing parameters corresponding to the selected values of the constraint parameters based on the parameter functions; and

(c3) a code segment to iterate (c1) and (c2) until values of the optimizing parameters are within a predetermined optimal range.

15. The machine readable medium of claim 13 wherein the constraint parameters include a delay parameter and the optimizing parameters include a power parameter.

16. The machine readable medium of claim 15 wherein the design constraints include a delay constraint.

17. (AMENDED) The machine readable medium of claim 16 wherein (a1) comprises:

a code segment to size components in each circuit.

18. (AMENDED) The machine readable medium of claim 16 wherein (a1) comprises:

a code segment to select a design technology for each circuit, the design technology being one of static and dynamic technologies.

19. (AMENDED) The machine readable medium of claim 18 wherein (a2) comprises:

(a21) a code segment to generate a circuit netlist representing the configured circuit;

(a22) a code segment to generate a timing file based on the circuit netlist using a circuit critical path;

(a23) a code segment to determine power vectors of the configured circuit based on the circuit netlist;

(a24) a code segment to calculate timing values; and

(a25) a code segment to calculate power values.

20. (AMENDED) The machine readable medium of claim 19 wherein the third code segment comprises:

(c1) a code segment to select values of the delay parameter within the delay constraints;

(c2) a code segment to determine values of the power parameter corresponding to the selected values of the delay parameter based on the parameter function; and

(c3) a code segment to iterate (c1) and (c2) until values of the power parameter are within a predetermined optimal range.

22. (THREE TIMES AMENDED) A system comprising:

a memory for storing program instructions;

a processor coupled to the memory to execute the program instructions, the program instructions when executed by the processor interacting with tools provided by a design environment causing the processor to at least

(a) create parameter functions for a plurality of circuits in a subsystem, the subsystem having design constraints, each one of the parameter functions corresponding to each one of the circuits, the parameter functions representing a relationship among design parameters of the subsystem, the design parameters including constraint and optimizing sets,

(b) select initial design points on the parameter functions having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and

(c) select new design points on the parameter functions such that the second sum is improved within the design constraints.

23. (AMENDED) The system of claim 22 wherein the program instructions causing the processor to create the parameter functions causes the processor to:

(a1) configure each circuit of the plurality of circuits; and

(a2) generate values of design parameters for each circuit according to the configured circuit, the values providing the parameter functions.

24. (AMENDED) The system of claim 22 wherein the constraint set includes constraint parameters having values selectable to meet the design constraints and the optimizing set includes optimizing parameters having values to be optimized.

25. (AMENDED) The system of claim 24 wherein the program instructions causing the processor to select the new design points causes the processor to:

(c1) select values of the constraint parameters to meet the design constraints;

(c2) determine values of the optimizing parameters corresponding to the selected values of the constraint parameters based on the parameter functions; and

(c3) iterate (c1) and (c2) until values of the optimizing parameters are within a predetermined optimal range.

26. The system of claim 24 wherein the constraint parameters include a delay parameter and the optimizing parameters include a power parameter.

27. The system of claim 26 wherein the design constraints include a delay constraint.

28. (NEW) A method comprising:

(a) generating first and second parameter functions for a circuit corresponding to first and second technologies, each of the first and second parameter functions relating a constraint parameter and an optimizing parameter;

(b) selecting a first initial design point and a first new design point on the first parameter function such that the first new design point corresponds to a first improved optimizing parameter within a design constraint;

(c) selecting a second initial design point and a second new design point on the second parameter function such that the second new design point corresponds to a second improved optimizing parameter within the design constraint; and

(d) selecting the first technology if the first improved optimizing parameter is better than the second improved optimizing parameter, else selecting the second technology.

29. (NEW) The method of claim 28 wherein the first technology is a dynamic technology and the second technology is a static technology.

REMARKS

Claims 1-20, and 22-27 are pending in the present application.

This Amendment is in response to the Office Action mailed April 24, 2001. In the Office Action, the Examiner objected to the title and abstract, provisionally rejected Claims 1-20 and 22-27 under 35 U.S.C. § 101 for double patenting, and rejected Claims 1-20 and 22-27 under 35 U.S.C. § 102. In response, Applicant has amended Claims 1, 3, 11, 13, 22, and 24 and add new claims 28 and 29. Applicant submits that the new claims 28 and 29 introduce no new matter. Support for new claims 28 and 29 is found in Figure 4 and Specification on page 17 (lines 6-24), page 18 (lines 1-5), and page 21 (lines 10-13). Reconsideration in light of the amendments and remarks made herein is respectfully requested.

I. TITLE

In the Office Action, the examiner objected to the amended title. In particular, the Examiner stated that the title of the invention is not descriptive. In response, Applicant has amended the title to change to DESIGN OPTIMIZATION OF CIRCUITS BY SELECTING DESIGN POINTS ON PARAMETER FUNCTIONS TO IMPROVE OPTIMIZING PARAMETERS OF CIRCUITS WITHIN DESIGN CONSTRAINTS.

Therefore, Applicant respectfully requests the objection to the title be withdrawn.

II. ABSTRACT

In the Office Action, the Examiner objected to the Abstract. In response, Applicant has amended the Abstract to recite the novelty of the invention. Therefore, Applicant requests the objection to the Abstract be withdrawn.

III. REJECTION UNDER 35 U.S.C. § 102(E)

In the Office Action, the Examiner rejected Claims 1-20, and 22-27 under 1) 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 5,838,947 issued to Sarin ("Sarin") or U.S. Patent No. 5, 880,967 issued to Jyu et al. ("Jyu"), 2) under § 102(a) as being anticipated by U.S. Patent No. 5,835,380 issued to Roething ("Roething") and 3) under § 102(b) as being anticipated by U.S. Patent No.5,619,420 issued to Breid ("Breid"). Applicant respectfully traverses the rejections for the following reasons.

Applicant reiterates the arguments against the rejections as set forth in the previous response. In addition, Applicant submits that Sarin, Jyu, Roething and Breid, taken alone or in any combination, do not disclose, suggest, or render obvious selecting initial design points having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and (2) selecting new design points for the parameter functions such that the second sum is improved within the design constraints. These aspects of the invention are supported in the specification on page 19 (lines 6-11), page 20 (lines 19-24), and page 21 (lines 1-9) and is recited in amended Claims 1, 11, and 22 as follows:

> ". . . initial design points on the parameter functions having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and . . . new design points on the parameter functions such that the second sum is improved within the design constraints." (Amended Claims 1, 11, and 22)

Applicant has also amended Claims 3, 13, and 24 to correct minor informalities.

Therefore, Applicant believes that independent Claims 1, 11, and 22 and their respective dependent Claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejections under 35 U.S.C. § 102(b) be withdrawn.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

ABSTRACT

Please delete the Abstract and insert the following in lieu thereof:

--One embodiment of the present invention is a method and machine readable medium for determining optimal values of design parameters of a subsystem to meet design constraints. The subsystem includes a number of circuits. A parameter function is created for the corresponding circuits. The parameter function represents a relationship among design parameters of the subsystem. The design parameters include constraint and optimizing sets. Initial design points for the parameter functions having a first sum of the constraint sets and a second sum of the optimizing sets are selected to such that the first sum satisfies the design constraints. New design points for the parameter functions are selected such that the second sum is improved while the first sum is within the design constraints.--

CLAIMS

1. (THREE TIMES AMENDED) A method comprising:

(a) creating parameter functions for a plurality of circuits in a subsystem, the subsystem having design constraints, each one of the parameter functions corresponding to each one of the circuits, the parameter functions representing a relationship among [the] design parameters of the subsystem, the design parameters including constraint and optimizing sets;

(b) selecting initial design points [for] on the parameter functions [to satisfy] having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and

(c) selecting new design points [for] on the parameter functions [to optimize design parameters] such that the second sum is improved within the design constraints.

3. (AMENDED) The method of claim 2 wherein [the design parameters include constraint and optimizing sets,] the constraint set [including] includes constraint parameters

having values selectable to meet the design constraints[,] and the optimizing set [including] includes optimizing parameters having values to be optimized.

11. (TWICE AMENDED) A machine readable medium having embodied thereon a computer program for processing by a machine, the computer program comprising:

(a) a first code segment to create parameter functions for a plurality of circuits in a subsystem, the subsystem having design constraints, each one of the parameter functions corresponding to each one of the circuits, the parameter functions representing a relationship among [the] design parameters of the subsystem, the design parameters including constraint and optimizing sets;

(b) a second code segment to select initial design points [for] on the parameter functions [to satisfy] having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and

(c) a third code segment to select new design points [for] on the parameter functions [to optimize design parameters] such that the second sum is improved within the design constraints.

13. (AMENDED) The machine readable medium of claim 12 wherein [the design parameters include constraint and optimizing sets,] the constraint set [including] includes constraint parameters having values selectable to meet the design constraints[,] and the optimizing set [including] includes optimizing parameters having values to be optimized.

22. (THREE TIMES AMENDED) A system comprising:

a memory for storing program instructions;

a processor coupled to the memory to execute the program instructions, the program instructions when executed by the processor interacting with tools provided by a design environment causing the processor to at least

(a) create parameter functions for a plurality of circuits in a subsystem, the subsystem having design constraints, each one of the parameter functions corresponding to each one of the circuits, the parameter functions representing a relationship among [the] design parameters of the subsystem, the design parameters including constraint and optimizing sets,

(b) select initial design points [for] on the parameter functions [to satisfy] having a first sum of the constraint set and a second sum of the optimizing set such that the first sum satisfies the design constraints; and

(c) select new design points [for] on the parameter functions [to optimize design parameters] such that the second sum is improved within the design constraints.

24. (AMENDED) The system of claim 22 wherein [the design parameters include constraint and optimizing sets,] the constraint set [including] includes constraint parameters having values selectable to meet the design constraints[,] and the optimizing set [including] includes optimizing parameters having values to be optimized.

28. (NEW) A method comprising:

(a) generating first and second parameter functions for a circuit corresponding to first and second technologies, each of the first and second parameter functions relating a constraint parameter and an optimizing parameter;

(b) selecting a first initial design point and a first new design point on the first parameter function such that the first new design point corresponds to a first improved optimizing parameter within a design constraint;

(c) selecting a second initial design point and a second new design point on the second parameter function such that the second new design point corresponds to a second improved optimizing parameter within the design constraint; and

(d) selecting the first technology if the first improved optimizing parameter is better than the second improved optimizing parameter, else selecting the second technology.

29. (NEW) The method of claim 28 wherein the first technology is a dynamic technology and the second technology is a static technology.

CONCLUSION

In view of the amendments and remarks made above, it is respectfully submitted that pending claims are in condition for allowance, and such action is respectfully solicited.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: October 24, 2001

THINH V. NGUYEN
Reg. No. 42,034

12400 Wilshire Boulevard, Seventh Floor
Los Angeles, California 90025
(714) 557-3800

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: October 24, 2001.

Barbara Hayashi — *Date* October 24, 2001

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP
3200 PARK CENTER DRIVE, SUITE 700
COSTA MESA, CA 92626

US bank
24-Hour Banking
1-800-673-3555

90-2267
1211

12626

VOID

Date 10/24/01

PAY ONE THOUSAND TWENTY TWO AND NO/100********** DOLLARS $ $ 1,022.00

TO THE ORDER OF Director of the United States Patent and Trademark Office

VOID

AUTHORIZED SIGNATURE

"012626" 1:121122676:164301268359"

DO NOT CASH THIS CHECK UNLESS YOU CAN SEE THE WORDS "CHECK PROTECT" ON REVERSE SIDE

DETACH AND RETAIN THIS STATEMENT
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

DATE	DESCRIPTION	AMOUNT
10/24/2001	U.S. Patent and Trademark Office extension of time fee and additional claims filing fee for DESIGN OPTIMIZATION OF CIRCUITS BY SELECTING DESIGN POINTS ON PARAMETER FUNCTIONS TO IMPROVE OPTIMIZING PARAMETERS OF CIRCUITS WITHIN DESIGN CONTRAINTS APP #09/148,392 FILED 9/4/98 INVENTOR BAEZ 042390.P5512 TVN/BH	$ 1,022.00

1526

12626